General

Guideline Title

Malignant pleural mesothelioma.

Bibliographic Source(s)

Alberta Provincial Thoracic Malignancies Tumour Team. Malignant pleural mesothelioma. Edmonton (Alberta): CancerControl Alberta; 2012 Dec. 22 p. (Clinical practice guideline; no. LU-009). [103 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Alberta Provincial Thoracic Malignancies Tumour Team. Malignant pleural mesothelioma. Edmonton (Alberta): Alberta Health Services, Cancer Care; 2010 Aug. 14 p. (Clinical practice guideline; no. LU-009).

Recommendations

Major Recommendations

1. Treatment options for patients with malignant pleural mesothelioma can include chemotherapy, radiotherapy, and/or surgery in a select number of patients. All patients diagnosed with malignant pleural mesothelioma should therefore be managed by a multidisciplinary treatment team. Whenever possible, patients should be considered for participation in ongoing clinical trials.
2. Chest wall invasion, nodal disease, distant metastases, and sarcomatoid histology preclude surgical intervention outside of a clinical trial setting. If surgery is indicated, it should only be performed in an experienced surgical centre in the context of a multidisciplinary treatment team.
3. Symptomatic treatment of patients with advanced malignant pleural mesothelioma may also include drainage of effusions, chest tube pleurodesis, or thoracoscopic pleurodesis.
4. Chemotherapy is recommended either alone for medically inoperable patients, or as part of a multimodality regimen for medically operable patients with malignant pleural mesothelioma. The combination of cisplatin and pemetrexed is the recommended first-line chemotherapy regimen.
5. Second line chemotherapy may include single-agent pemetrexed (if not used with cisplatin for first-line therapy), gemcitabine, or vinorelbine.
6. Adjuvant radiotherapy can be used in selected patients to improve local control.
7. Radiotherapy should also be considered for palliation. The timing, dose, and fractionation of radiation should be based on the intent of treatment.
8. Radiotherapy may also be considered to prevent instrumentation (i.e., chest tube) tract recurrence after surgical interventions.
9. Select patients may be candidates for aggressive multimodality therapy; patient cases being considered for this approach should be

presented and discussed within a multidisciplinary tumour board setting.

Clinical Algorithm(s)

An algorithm titled "Algorithm for the Management of Malignant Pleural Mesothelioma" is provided on the Alberta Health Services Web site .

Scope

Disease/Condition(s)

Malignant pleural mesothelioma

Note: Although mesothelioma can also rarely occur in the peritoneum, this guideline focuses on malignant pleural mesothelioma, which is the most common and therefore has the greatest levels of evidence supporting the recommendations.

Guideline Category

Management

Treatment

Clinical Specialty

Oncology

Pulmonary Medicine

Radiation Oncology

Surgery

Thoracic Surgery

Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide management strategies for patients with malignant pleural mesothelioma

Target Population

Adults over the age of 18 years diagnosed with mesothelioma

Interventions and Practices Considered

1. Management by a multidisciplinary treatment team
2. Consideration for participation in ongoing clinical trials
3. Symptomatic treatment (drainage of effusions, chest tube pleurodesis, or thoracoscopic pleurodesis)
4. Surgery
5. Chemotherapy
    - First-line chemotherapy: cisplatin + pemetrexed
    - Second-line chemotherapy: single-agent pemetrexed (if not used with cisplatin for first-line therapy), gemcitabine, or vinorelbine
6. Radiotherapy
    - Adjuvant
    - Palliative
    - For prevention of instrumentation (i.e., chest tube) tract recurrence after surgical interventions
7. Aggressive multimodality therapy in select patients as clinically indicated

Major Outcomes Considered

- Tumour response rate
- Survival (overall, disease-free, progression-free)
- Local recurrence rate
- Adverse effects of treatment
- Surgical complication rate
- Symptomatic improvement rate
- Morbidity and mortality

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Research Questions

Specific research questions to be addressed by the guideline document were formulated by the guideline lead(s) and Knowledge Management (KM) Specialist using the PICO question format (Patient or Population, Intervention, Comparisons, Outcomes).

Guideline Question

- What is the recommended management strategy for patients with malignant pleural mesothelioma?

Search Strategy

Medical journal articles were searched using the PubMed (January 1, 2010 to December 6, 2012), Medline (2010 to 2012), and CINAHL (2010 to 2012) electronic databases; the references and bibliographies of articles identified through these searches were scanned for additional sources. The MeSH heading Mesothelioma was combined with the search terms "Surgery", "Radiotherapy", "Drug Therapy", and "Therapy". The results were limited to adults, humans, clinical trials, comparative studies, controlled clinical trials, government publications, journal articles, meta-analyses, multicentre studies, practice guidelines, randomized controlled trials, reviews and systematic reviews. Articles were excluded from the final review if they: had a non-English abstract, were not available through the library system, involved less than 10 patients, or were published

before the year 2010. A review of the relevant existing practice guidelines for mesothelioma was also conducted by accessing the guidelines of the British Columbia Cancer Agency, Cancer Care Ontario, European Society for Medical Oncology, National Comprehensive Cancer Network, National Cancer Institute, and the National Institute for Health and Clinical Excellence. The appropriateness of these guidelines for inclusion in the final evidence review was assessed using portions of the Appraisal of Guidelines for Research and Evaluation (AGREE) tool.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Evidence was selected and reviewed by a working group comprised of members from the Alberta Provincial Thoracic Malignancies Tumour Team and a Knowledge Management (KM) Specialist from the Guideline Utilization Resource Unit (GURU). A detailed description of the methodology followed during the guideline development process can be found in the Guideline Utilization Resource Unit Handbook (see the "Availability of Companion Documents" field).

Evidence Tables

Evidence tables containing the first author, year of publication, patient group/stage of disease, methodology, and main outcomes of interest are assembled using the studies identified in the literature search. Existing guidelines on the topic are assessed by the KM Specialist using portions of the Appraisal of Guidelines Research and Evaluation (AGREE) II instrument (http://www.agreetrust.org) and those meeting the minimum requirements are included in the evidence document. Due to limited resources, GURU does not regularly employ the use of multiple reviewers to rank the level of evidence; rather, the methodology portion of the evidence table contains the pertinent information required for the reader to judge for himself the quality of the studies.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Formulating Recommendations

The working group members formulated the guideline recommendations based on the evidence synthesized by the Knowledge Management (KM) Specialist during the planning process, blended with expert clinical interpretation of the evidence. As detailed in the Guideline Utilization Resource Unit Handbook (see the "Availability of Companion Documents" field), the working group members may decide to adopt the recommendations of another institution without any revisions, adapt the recommendations of another institution or institutions to better

reflect local practices, or develop their own set of recommendations by adapting some, but not all, recommendations from different guidelines.

The degree to which a recommendation is based on expert opinion of the working group and/or the Provincial Tumour Team members is explicitly stated in the guideline recommendations. Similar to the American Society of Clinical Oncology (ASCO) methodology for formulating guideline recommendations, the Guideline Utilization Resource Unit (GURU) does not use formal rating schemes for describing the strength of the recommendations, but rather describes, in conventional and explicit language, the type and quality of the research and existing guidelines that were taken into consideration when formulating the recommendations.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This guideline was reviewed and endorsed by the Alberta Provincial Thoracic Malignancies Tumour Team.

When the draft guideline document has been completed, revised, and reviewed by the Knowledge Management (KM) Specialist and the working group members, it is sent to all members of the Provincial Tumour Team for review and comment. This step ensures that those intended to use the guideline have the opportunity to review the document and identify potential difficulties for implementation before the guideline is finalized. Depending on the size of the document, and the number of people it is sent to for review, a deadline of one to two weeks will usually be given to submit any feedback. Ideally, this review will occur prior to the annual Provincial Tumour Team meeting, and a discussion of the proposed edits will take place at the meeting. The working group members will then make final revisions to the document based on the received feedback, as appropriate. Once the guideline is finalized, it will be officially endorsed by the Provincial Tumour Team Lead and the Executive Director of Provincial Tumour Programs.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate management of malignant pleural mesothelioma

Potential Harms

- Complications of surgical intervention
- Toxicity of chemotherapy and radiotherapy

Qualifying Statements

Qualifying Statements

The recommendations contained in this guideline are a consensus of the Alberta Provincial Thoracic Malignancies Tumour Team and are a synthesis of currently accepted approaches to management, derived from a review of relevant scientific literature. Clinicians applying these guidelines should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care.

Implementation of the Guideline

Description of Implementation Strategy

- Present and review the guideline at the local and provincial tumour team meetings and weekly rounds.
- Post the guideline on the Alberta Health Services website.
- Send an electronic notification of the new guideline to all members of Alberta Health Services, Cancer Care.

Implementation Tools

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

End of Life Care

Getting Better

Living with Illness

IOM Domain

Effectiveness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2010 Aug (revised 2012 Dec)

Guideline Developer(s)

CancerControl Alberta - State/Local Government Agency [Non-U.S.]

Source(s) of Funding

Alberta Health Services, CancerControl Alberta

There was no direct industry involvement in the development or dissemination of this guideline.

Guideline Committee

Alberta Provincial Thoracic Malignancies Tumour Team

Composition of Group That Authored the Guideline

Not stated

Financial Disclosures/Conflicts of Interest

Participation of members of the Alberta Provincial Thoracic Malignancies Tumour Team in the development of this guideline has been voluntary and the authors have not been remunerated for their contributions. CancerControl Alberta recognizes that although industry support of research, education and other areas is necessary in order to advance patient care, such support may lead to potential conflicts of interest. Some members of the Alberta Provincial Thoracic Malignancies Tumour Team are involved in research funded by industry or have other such potential conflicts of interest. However the developers of this guideline are satisfied it was developed in an unbiased manner.

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Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the Alberta Health Services Web site .

Availability of Companion Documents

The following is available:

- Guideline utilization resource unit handbook. Edmonton (Alberta): CancerControl Alberta; 2013 Jan. 5 p. Electronic copies: Available in

Portable Document Format (PDF) from the Alberta Health Services Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on February 10, 2012. The information was verified by the guideline developer on March 30, 2012. This summary was updated by ECRI Institute on April 28, 2014. The updated information was verified by the guideline developer on May 22, 2014.

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